

# **Coal Miners' Chest X-ray Program**

## **Problem Booklet**

## Instructions

Read the problem situation described on the next page. Next, answer each of the questions. Do them one at a time. Don't jump ahead, but you may look back to earlier questions and answers. Some questions ask you to select **all** of the answers that you think are correct. Other questions ask you to select only **one** answer unless you are told to "Try again!" Follow the directions for each question.

After you have selected a choice to a question, look up its number on the answer sheet. Select your answer(s) to each question by rubbing the developing pen between the brackets on the answer sheet. A hidden message will appear and tell you if you are right. When you have finished, you will learn how to score your performance.

## Background

You, Jeb, Tony and Sam work at Wheeler Creek Coal Mine on 3 Left Section.

Wheeler Creek's miners are represented by a union.

You are a shuttle car driver.

Jeb has worked as a beltman for 2 1/2 years. He is 25 years old. This is his first job as an underground miner.

Tony is a supplyman, 34 years old, married with three children. He has worked 16 years at this mine. He worked as a bolter operator for 12 years. Tony has been a non-smoker for the last four years.

Sam is the continuous miner operator, 53 years old, married, with two children and one grandchild. He smokes 2 packs a day. He has 32 years experience as an underground miner with 15 years as a continuous miner operator.

The company bulletin board near the bathhouse displays a federal form announcing the periodic chest x-ray examinations for this mine. The exam period begins tomorrow and ends in 180 days.

The examinations will be held at Memorial Hospital, 15 miles from the mine, and Smith Valley Hospital, 35 miles away.

## Problem

You, Jeb, Tony and Sam are eating lunch at the dinner hole. Jeb asks about the x-ray program. Turn to question A.

**Question A**

Jeb asks you, "What is this chest x-ray program?" What should you tell him? (Select as MANY as you think are correct.)

1. All miners new to the industry are required to have a chest x-ray within the first 6 months of beginning work in an underground coal mine.
2. The program allows all underground miners the right to choose to have a free x-ray 3 years after their initial employment x-ray.
3. This program gives all underground miners the right to have a free x-ray every 4 to 5 years.
4. This program says all miners MUST have an x-ray every 4 to 5 years.
5. This is a program run by the company to identify workers with black lung problems, so miners may be denied their benefits.

**When you have made your selection(s), do the next question.**

## Question B

Jeb asks, "Have any of you guys ever taken the exam?" Tony says, "I did 4 years ago. I got a letter that said my x-ray showed Category 1 CWP (Coal Workers Pneumoconiosis). I transferred to a less dusty job." What is true about Tony's transfer? (Select as MANY as you think are correct.)

6. To obtain his transfer, Tony had to complete and send an option to transfer form to MSHA officials.
7. To obtain a transfer, Tony had to have known someone and arranged on his own to find a less dusty job.
8. When Tony used his letter, he may have jeopardized his black lung benefits.
9. When Tony chose to use his letter, he risked being laid off or fired so the company could avoid paying compensation in the future.
10. By transferring to a less dusty job, Tony may have reduced his risk of a worse case of CWP.
11. Tony could have chosen to have kept his old job as a bolter operator and not used the letter.
12. If Tony's old job had dust levels at or below 1.0 mg/m<sup>3</sup>, he could not have used his transfer letter.
13. For Tony to have transferred to a new job, dust levels on his old job must have exceeded 1.0 mg/m<sup>3</sup>.
14. After the transfer, Tony received the pay for the new job he transferred to.
15. After his transfer, Tony had to carry a dust sampler 6 times per year.

**When you have made your selection(s), do the next question.**

**Question C**

Sam says he also had a chest x-ray 4 years ago, and that he also got a transfer letter for category 1 CWP. He says he decided not to transfer because he was going to retire soon and was afraid that he might not get his black lung benefits. What are some things Sam could do to reduce risk from CWP and other related diseases. (Select as MANY as you think are correct.)

- 16. Wear his NIOSH-MSHA approved dust respirator when he is working on the section.
- 17. Wear his NIOSH-MSHA approved dust respirator when he is cutting coal and when the air looks dusty.
- 18. Quit or reduce his smoking.
- 19. Reverse his CWP by taking multiple vitamins and eating a healthy diet.

**When you have made your selection(s), do the next question.**

**Question D**

Once Jeb (or any other miner) decides to have a chest x-ray as part of the NIOSH coal miner x-ray surveillance program, what happens? (Select as MANY as you think are correct.)

- 20. He must pay for the x-ray and the doctor to read it.
- 21. His x-ray will be given to the company.
- 22. His x-ray will be read by a NIOSH certified physician at the hospital where he was examined.
- 23. If Jeb has any category of CWP, his company, the union and his family physician will be notified.
- 24. Jeb will receive a letter telling him of the results of his examination.

**When you have made your selection(s), do the next question.**

**Question E**

Jeb asks if it is important for him to get an x-ray. (Until now Jeb didn't realize he had taken the initial NIOSH chest x-ray, thinking the x-ray was just part of his pre-employment physical.) After all, he has only worked 2 1/2 years in the mine. He said he doesn't think he would have any disease. Should he get an x-ray? (Select as MANY as you think are correct.)

- 25. Yes. Young miners with 2 1/2 years experience can have non-CWP related chest and lung problems.
- 26. He doesn't need an x-ray. He feels good. He appears to be healthy.
- 27. No. This x-ray should be avoided because it increases the risk of cancer.
- 28. Yes. This x-ray can serve as the required third year x-ray.

**When you have made your selection(s), do the next question.**

**Question F**

After he talks with you, Jeb decides to get the x-ray. He now knows that the results will be returned to him. Where else do the results go? (Choose only ONE unless you are told to "Try again!")

- 29. To his union. They need the results to support him if he later files for compensation.
- 30. To the company and the safety director.
- 31. To his family doctor.
- 32. To the MSHA District Office.
- 33. To MSHA Headquarters, Arlington, Virginia.

**Question G**

After the local NIOSH certified doctor reads the chest x-rays of Tony's, Jeb's and other miners who participate in the program, he sends them to the NIOSH Morgantown office. Why? (Select as MANY as you think are correct.)

- 34. Because the regulations require a second reading of the x-ray.
- 35. So that NIOSH can inform the miner's company and union of the results.
- 36. NIOSH studies the results to determine if the current dust standard (2.0 mg/m<sup>3</sup>) adequately protects the health of the miners.
- 37. So that NIOSH will notify the national MSHA office in Arlington, Virginia of all miners' x-ray results.
- 38. If a miner is found to have CWP, MSHA sends a copy of his transfer letter to the regional black lung compensation office.
- 39. So that NIOSH may follow the respiratory health of miners throughout their working lifetime as a coal miner.
- 40. So that MSHA or NIOSH can send a letter to the miner saying that he is eligible for black lung compensation, if this is necessary.

**When you have made your selection(s), do the next question.**

**Question H**

Why should Tony and other miners take x-rays under the NIOSH program? (Select as MANY as you think are correct.)

- 41. It is necessary to obtain black lung benefits.
- 42. Miners cannot receive transfer letters unless they take the x-ray under the NIOSH program.
- 43. A miner may have some serious health problem that a chest x-ray can identify.
- 44. A physician certified by NIOSH as a B-reader can read x-rays for dust diseases of the chest.
- 45. X-rays taken by a family doctor in any hospital can be accepted by and processed by NIOSH.

**When you have made your selection(s), do the next question.**

Jeb had his x-ray. He was pleased to learn he had no serious problem.

Sam chose to attend a quit-smoking class and was able to reduce his smoking by 1 pack a day. He felt this was a good start. He also requested a NIOSH approved dust respirator. He now wears it every day, all shift except when he is eating.

Tony still takes care of himself by wearing a respirator when it is necessary for him to go back into the dust, and by continuing not to smoke.

### **End of Problem**

#### **Scoring your performance**

1. Count the total number of responses you colored in that were marked "correct". Write this number in the first blank on the answer sheet.
2. Count the total number of "incorrect" responses you colored in. Subtract this number from 23. Write the difference in the second blank on the answer sheet.
3. The best score is 45. The worst score is 0.